



Vermont EMS District 12 Newsletter

Pens and Needles



Winter 2007-2008

Thanks for a great year!

2007 was a great year for the District 12 training committee!

We saw the re-creation of the District Web Page; www.vtemsd12.com; the graduation of new EMT-Basic and EMT-Intermediate 03 students, the initiation of EMT-I skills sessions, and a very busy continuing education schedule.

We celebrated with Ralph Genella at the launch of Green Ambulance Simulator; www.greenambulancesimulator.com; and with Dr. Daniel Perregaux, our medical director, as he was awarded the SVMC Magnet Physician Award for 2007.

We are looking forward to an even busier year in 2008! The website will continue to be updated regularly with the most current education schedules and District information. Expect to see more EMT-I level training, including a refresher, and more interesting continuing education this year!

As always, if you have any ideas or questions, you are encouraged to share them with your training officer or the training committee. We meet in the EMS and EP Training Center on the last Thursday of each month at 7 pm.

Thanks for all you do! Inge

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Happy Holidays!

Happy and Safe Holidays to you and your families from the entire District.

- Arlington Rescue Squad
- Bennington Rescue Squad
- Deerfield Valley Rescue Squad
- East Dover Volunteer Fire Department

- Manchester Rescue Squad
- Mount Snow Rescue
- North Adams Ambulance Service
- Pownal Fire Protective Association
- Pownal Rescue Squad
- Salem Rescue Squad

- Southwestern Vermont Regional Ambulance
- Stamford Volunteer Fire Department
- Village Ambulance Service
- Whitingham Ambulance Service
- Winhall Police and Rescue

A different side of ABCs.

In EMS we seem to be the kings and queens of silly abbreviations and sayings. At least, we enjoy our jobs, and it helps to ease the tension we may face on a daily basis. One example of an abbreviation is ABC.

Many of us immediately think: Airway, Breathing and Circulation.

But those of us who have been in this longer may have heard other options:

***Acute Before Chronic** (triage) ***Always Bring Chux** (for those incontinent patients) ***Apneic Before Combative** (a reason not to give too much narcan...) And... ***Ambulate Before Carry** (a reminder that our backs pay a huge price in this field).

However, as much as we joke, there is a very compelling reason to both carry and not carry patients. Ultimately the safety of the *crew and patient* must be considered.

For example, take the 350 pound male who was just involved in a low speed MVA, he was hit from behind and is ambulatory on scene. He is irate, screaming and yelling at the person who hit his car, and clearly moving all extremities. When you approach he states "I am fine" but once the police arrive on scene he suddenly has neck pain and wants to sue. He requests transportation to the Hospital for evaluation... What do you do?

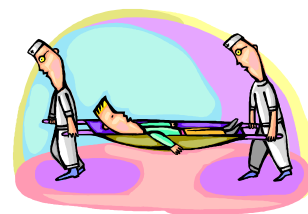
By protocol, a standing take down is in order. He is 6'4", and you have a 2 person crew of 2 women, each 5'3". Is this a safe decision? Is there a risk here for both the patient and the crew if a standing take down is attempted?

Now, you are on scene of a 75 year old female who is sitting on the couch complaining of hip pain. She states that she bumped into the washing machine and fell from a standing height to a linoleum floor. Her family assisted her to the couch and she is not able to bear weight on that leg. You can easily get the stretcher to her. Protocol is a scoop or long board for suspected fracture. You know that she will be more comfortable on the stretcher than the immobilization device. She is small enough that she can be safely lifted on an immobilization device. Your crew is capable to lift without danger. What do you do?

In both of these scenarios there exists flexibility of provider discretion. However, when in doubt always try to follow your written protocols. They have been proven to be the safest for the patient, and produce the best outcome.

In the first scenario you may attempt to enlist the assistance of a few fire fighters on scene, or you may apply a collar and the patient may refuse long board. Either way documentation of ANY variation from standard protocol is the key! If the patient insists on walking to the ambulance and climbing in to sit and then lie down on the long board, document that it was his decision. Document CSMT/PMS pre and post. You already know that this guy wants to sue someone! Don't let it be you!

In the second scenario, failure to immobilize the patient has the potential to make the patient worse. Standing a potential fracture, even just to pivot to the stretcher, runs the very real risk of lacerating blood vessels and causing internal hemorrhage. When pain or mechanism suggests a skeletal injury, immobilization is in order. If the patient becomes short of breath or cannot tolerate a supine position, the scoop stretcher can easily be removed from beneath the patient, and you may move the patient as little as possible to alleviate the problem. If you have to remove a patient from an immobilization device, be sure to document CSMT/PMS pre and post removal, how much or little you adjusted the position of the patient, and what the outcome was.



In conclusion, it is good practice to evaluate the safety of both your patients and your crew during any move. Reliance on your protocols to dictate patient safety combined with flexibility based on your knowledge of your crew will help guide you in the safest route. Documentation of any variance from standard protocol is necessary for both QI and legal aspects.

Thanks for all your great work out there! Inge

Back to Basics Campaign 2008

At the November 2007 Training Committee Meeting, the training officers from each agency represented reviewed the trends for the year 2007. We identified three key areas for growth in the year 2008.

As part of our plan to make this a collaborative effort for change and improvement, we want to share our findings with you.

The three key areas we identified that we all can improve upon are:

1. Oxygen therapy

- a. The State of Vermont EMS Protocols state that high concentration oxygen should be applied to all patients in need of oxygen therapy unless one of the following conditions apply:
 - i. You are transporting a patient on home oxygen at their normal rate because their current condition or complaint would not benefit from an increase in oxygen level and you clearly document it.
 - ii. The patient cannot tolerate or refuses a non-rebreather mask and you document the reason for variation.
- b. This applies to EMTs, Intermediates and Paramedics.

2. Vital signs

- c. The State of Vermont EMS Protocols and the District 12 Policy Manual state that vital signs should be taken at least every 15 minutes on a stable patient and every 5 minutes on an unstable patient, unless:
 - i. You are in the process of extrication and you document why a lapse in vital sign monitoring occurred.
 - ii. You are dealing with a patient with a threat to ABCs and vital signs could never be obtained due to that issue and you document it clearly.
 - iii. The patient is combative and you cannot obtain a full set of vital signs and you document it clearly.

3. Immobilization of injuries

- d. When a fracture is suspected based on mechanism, complaint or signs of deformity please immobilize.
- e. Every time a patient is immobilized using any device or technique it is important to check and document peripheral pulses, perfusion, motor and sensory function. We use CSMT (color, sensation, mobility, temperature) or PMS (pulse, motor, sensory) as a mnemonic to help us remember.
- f. Documentation of CSMT/PMS pre and post all immobilization helps to ensure that our treatment has not been harmful to the patient. This includes checking the hands and feet of someone being immobilized on a long board.

We will use the statistics we gathered from the time period of August 2007 through October 2007 to form a baseline for comparison. We will compare this to the percentage of times we vary from protocol without the necessary documentation from January 1st through March 31st 2008. Our goal is to decrease these percentages by half!

To help us show improvement within the District we ask that each and every one of us do the following:

~Apply high concentration oxygen as indicated and document any variance accordingly

~Take vital signs at the appropriate time intervals and document any variance accordingly

~Immobilize any suspected fracture and document CSMT/PMS pre and post splinting accordingly.

Remember, a variance from protocol is sometimes the right thing to do for the patient, it just needs to be documented clearly. For more information about how you can help be part of the campaign please see your training officer or contact any member of the training council!

Together we can make a difference!

Deerfield Valley Rescue Receives "Life Saving Team Commendation"

On November 17th, 2007 Christian Phelps, RN, BS, NREMT-P the EMS and Emergency Preparedness Coordinator for Southwestern Vermont Medical Center, was on hand at the Deerfield Valley Rescue Squad's annual banquet. He had the pleasure of good food and company as well as the privilege to present five of DVR's members with a very special award.

Chris addressed the group saying, *"Everyday our EMS Providers are making a difference and saving lives. Often without the recognition or reward due for such heroic measures. They don't do it for the pay or the recognition. EMS is a calling. The men and women involved in EMS give so much of themselves for the sake and safety of their fellow man; few others truly understand the sacrifice and commitment of the EMS professional."*

"Southwestern Vermont Medical Center is proud of each and every one of our EMS providers. They are a vital component of our communities, but equally importantly, they are an integral part of the hospital team. It is often difficult to demonstrate improved patient outcomes due to EMS actions. However, EMS does make a difference. Every day, EMS makes a difference in people's lives. Some are newsworthy, but most are subtle and hidden in the larger scope of the patients complete medical treatment. Often the EMS providers are not recognized for the value of their dedication and commitment."

"SVMC has recently begun a program to recognize and pay tribute to EMS agencies and providers who demonstrate excellence in the assessment and care of patients resulting in significant improvements in patient outcomes. It is my honor, on behalf of Southwestern Vermont Medical Center to present this award and Life Saving Team Pins to 5 members of Deerfield Valley Rescue Squad in recognition for such excellence in care."

He then presented Heidi Taylor, Carol Gunderson, Danielle Covey, Bobby Maynard and Mike Aldrich with the SVMC Life Saving Team Commendation pins. They had been paramount in saving the life of the following patient:

On Tuesday October 16th of this year, Deerfield Valley Rescue was called to a medical emergency at Lake Harriman; a forty-seven year old male suffering a massive heart attack. The patient was on a hiking trail deep in the woods; requiring a 15 minute trek for the EMS responders to even reach the patient. Due to the excellent clinical assessment skills—without any fancy monitors or expensive equipment—only using their knowledge and experiences, they recognized this patient as being critically unstable and possibly suffering a heart attack. They rapidly treated this patient and prepared him to be carried from the location to the ambulance. Recognizing that this transfer through rugged terrain would require considerable time (approximately 45 minutes or more) and the urgency for which this patient needed to receive definitive care, the EMS team developed a plan of action to expedite this delivery of care. The DVR team called for a helicopter to perform aero-medical evacuation. With the assistance of two fire departments the emergency responders were able to rapidly extricate the patient from the woods and set up a landing zone for the helicopter. The patient was transferred via helicopter directly to Albany Medical Center Hospital where, due to his poor condition, he was taken directly from the helicopter into the cardiac catheterization lab. Without getting too technical, several major coronary arteries were blocked and required extensive treatment. The patient subsequently completely recovered and returned home. In the words of the flight crew and physicians in the cath lab, this patient would not have survived and recovered as quickly as he did had it not been for the rapid recognition of the patient's condition by EMS and the exemplary teamwork involved in extricating him from the scene and delivering him to the most appropriate hospital for definitive care.

If you or your service would like to nominate someone for the SVMC Life Saving Team Commendation please visit the District 12 website at www.vtemsd12.com under the "Thumbs Up" section. Nominations are open to any EMS agency or EMS providers within the SVHC coverage area who were involved in the saving of a life based on the following criteria

- * Patient was in imminent danger of death.
- * ALS and/or BLS interventions, extrication or treatment was rendered.
- * Interventions and Treatment was consistent with approved protocols.
- * Patient was transported to a hospital and subsequently discharged from the hospital to home.



Altered Mental Status

By Carl "Trey" Dobson, M.D.

A call goes out for a two year old reported to be intermittently listless with periods of bizarre behavior. You find the toddler in his mother's arms appearing sleepy. His respiratory rate is 18, heart rate 130, and blood pressure 90/40. Mom says she found him like this one hour ago after returning home from work. Her boyfriend was watching the child, but he is not present. She appears appropriately concerned and attentive. There are no signs of trauma, but you deem it reasonable to fully immobilize him. A quick survey of the residence reveals a disheveled home with trash piled in the corners. You proceed with IV, O₂, and monitor.

Altered mental status is a common theme in Emergency Medicine. The body's defense mechanisms are breaking down, and figuring out why is like detective work. "Altered" implies organ malfunction, either primarily in the central nervous system, or as a result of other organ failure. The underlying cause may be obvious, such as penetrating head trauma. More often, however, the etiology is elusive. A timely diagnosis with appropriate intervention leads to reduced morbidity and mortality. Therefore, keeping a broad differential while focusing on critical actions is key to a good outcome.

A mnemonic I find useful for working through the differential of altered mental status is WHIMPS.

W	Wernicke's encephalopathy (thiamine deficiency); withdrawal, especially from benzodiazepines or alcohol
H	hypo- and hyperthermia; hypo- and hyperglycemia; hyponatremia; hypo- and hypercalcemia; hypoxia; hypercarbia; hypothyroid
I	infection, such as sepsis, meningitis, and encephalitis; intracranial hemorrhage; ischemia from stroke, myocardial infarction, and aortic dissection; intussusception in children
M	mass, especially intracranial
P	poisons, including pills, carbon monoxide, insecticides; pulmonary embolism
S	status (non-convulsive); seizure with post-ictal phase; seizure in the pregnant eclamptic

Even when the diagnosis appears evident, deviating from critical actions can be detrimental. Some examples include the intoxicated patient with an unsuspected high c-spine injury, the hypoxic gardener with organophosphate toxicity, and of course the "stroke patient" with hypoglycemia. In addition to IV, O₂, monitor, and ECG, consider NGT (naloxone, glucose, thiamine). Two other critical actions are specific to Emergency Medical Services personnel. The first one, scene assessment, can provide clues that may otherwise never become apparent. Second, identifying all medications is extremely important, including those available over the counter. Many drug-drug interactions can lead to decreases in hepatic and renal metabolism and excretion. The serum or CNS level of the drug can then become toxic. Additionally, dozens of commonly prescribed medications pose some anticholinergic or antihistamine properties, each of which can lead to changes in level of consciousness.

The child in the scenario above spent hours in the ED with a negative workup. He was acidotic and doing poorly, so blood was tested for toxic alcohols. The results were positive for ethylene glycol. Apparently, kids, like dogs, love antifreeze. This case shows that keeping an open mind and developing a diverse differential is similar to being a detective. Not only is it in the patient's best interest, it will keep your game interesting and your mind sharp.

~Dr. Dobson is the current SVMC Emergency Department Director and a ongoing supporter of EMS education.

Ralph Genella Launches Green Ambulance Simulator with Rave Reviews!

Green Ambulance Simulator (GAS) is a mobile training lab designed to facilitate emergency training in New England using cutting edge equipment and educational approaches. Its founder, Ralph J. Genella EMT-I, coupled his love for EMS work with his knowledge of computers and video games to design an ambulance simulator complete with Laerdal's SimMan, SimBaby, and the Ultimate Hurt as well as assorted airway heads, and iv arms. He recognized the need for sophisticated training for EMS personnel to bring their training to the next level. With input from his wife and business partner, Roberta M.L. Green, Ed.D., Green Ambulance Simulator was created.

GAS is now ready to run a wide variety of scenarios at any location that can provide us with electricity and EMS personnel that want to be challenged. To date, GAS has demonstrated their ability to facilitate training at Arlington Rescue, Deerfield Valley Rescue, the SVMC Deerfield Valley Campus, and Springfield Technical Community College to name a few. GAS has also assisted with the I-Tech refresher courses held at SVMC and Southwestern Vermont Regional Ambulance. The scenarios thus far have ranged from sudden cardiac arrest to simulated terrorist attacks, but can be designed to cover a variety of medical and trauma emergencies. Scenarios can be run in the ambulance or outside within a 25 feet of the rig.

A typical class begins long before GAS arrives on scene with extensive communication between the training officer or program coordinator and Ralph. Once the type of scenario is decided upon, and what sort of skills are to be challenged Ralph, with the input of the teaching staff, will design a customized scenario and program the simulators to react at the training event. The session starts with a orientation about the manikins and when appropriate a heads up about what is to be expected. While the responding crew is running a call, peers can view their performance on a screen outside of the ambulance. After the calls are run, a debriefing time is held. All 'calls' are digitally recorded, and can be copied onto a DVD and left with the training officer so further debriefing can take place at subsequent meetings, and so squads can document their improvement over time.



Above, EMT-Intermediates Mark Luce, Mike Mroz and Travis Beebe practice BLS and ALS skills at the last EMT-I skills night. Photo courtesy of Ralph Genella and GAS.



Members of Deerfield Valley Rescue work on a simulated patient at their squad training in September, 2007. Photo courtesy of Ralph Genella and GAS.

To learn more about GAS and the capabilities of the simulators visit:

www.greenambulancesimulator.com

or via e-mail at:

greenambulance@hotmail.com

January 2008

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
		1	2	3	4	5
		Happy New Year!		7 pm District Board Meeting SVMC EMS Training Center		
6	7	8	9	10	11	12
		6PM Drowning: Accidental or Not? Dinner and presentation Mount Anthony Country Club, Bennington. Pre-registration required. \$25.00				
13	14	15	16	17	18	19
		7 pm PARAMEDIC Training SVMC EMS Training Center				
20	21	22	23	24	25	26
					0800-1700 Pediatric Advanced Life Support (PALS) Renewal Course SVMC. \$125.00 Contact: 447-5637	
27	28	29	30	31		
				7 pm Training Committee SVMC EMS Training Center		

Vermont EMS District 12

Edited by the VT EMS D12 Training Council
C/O Inge Smith Luce
100 Hospital Drive, Box 10
Bennington, VT 05201
smii@phin.org (802) 447-5029

For additions to the yearly calendar
Please contact Bobby Maynard, EMT-I/03
bobby@dvrescue.com
(802) 464-5557

Kudos Corner

Inge would like to give a kudos to:
Crystalee O'Dell of BRS in recognition for a
job well done on a recent transfer.
"Crystal did an amazing job on her run form,
it was complete, easy to read and very
thorough! Well done!"

To give a kudos to an EMS provider- just
email Inge at smii@phin.org with who you
want to recognize and why!

CONGRATULATIONS!

EMT-Intermediate/03 Class of June 07

Ethel Altiery, Pownal Rescue
Travis Beebe, Manchester Rescue
Marty Irion, Arlington Rescue
Barbara Keyes, Southwestern VT Regional Ambulance
Brenda Mattison, Arlington Rescue
Mike Mroz, Southwestern VT Regional Ambulance
Laurie Pudvar, Pownal Rescue
Conn Rose, Deerfield Valley Rescue

GOOD LUCK!

EMT-Basic Class of December 07

Penny Burdick	Joyce Novotny
Monica Davis	Charles Putnam
Nicole Dernier	Logan Sherman
Lori Goodell	Ian Taylor
Richard Gurry	Derrick Tienken
Monica Jones	Keith Upham
Corrinne Levin	Michelle Wolcott
Kristin Long	

State Protocol Review- Altered Level of Consciousness

General Considerations:

- Assure and maintain ABCs as needed.
- Consider possible causes (see Dr. Dobson's article on page 4 for a great review).
- Assume spinal injury if trauma cannot be excluded.
- If several people have similar complaints suspect an environmental cause

History and Physical Exam:

- Aside from the routine questions and examination:
- What is the patient's baseline mental status?
- When was the patient last known to be at baseline?
- Palpate the pulse for a full minute to feel for any arrhythmias
- Observe for incontinence of urine/stool.

Perform the Cincinnati Stroke Scale:

- *Observe for facial asymmetry
- *Have the patient hold their arms out in front of them with the palms turned upwards and close their eyes. Observe for any arm drift while you count to 10.
- *Have the patient say "the quick brown fox jumped over the lazy dog" and observe for any slurring of speech.

The presence of any one or more abnormalities indicates a possible stroke.

However! Keep in mind that hypoglycemia and hypoxia as well as hypotension can often mimic signs and symptoms of a stroke.

Placing the patient on oxygen, keeping them warm, checking a blood sugar and a blood pressure will help you determine if there are any other underlying problems.

The key to appropriate management is good fact finding!

Treatment:

EMT-Basic

- ABCs
- High concentration oxygen
- Transport in recovery position or immobilized.

EMT-Intermediate

- Manage ABCs as indicated
- Check blood sugar level
- Secure IV access
- Medicate as ordered

Paramedic

- Manage ABCs as indicated
- Check blood sugar level/Secure IV access
- Monitor cardiac rhythm
- Medicate per protocol